



April 9, 2010

General Information:

Location: Conference Room A&B at BC Public Works, 2400 Broadway SE

Time: 8:30 a.m. -10:30 a.m.

Board Members Present: Michael Bitner, Bruce Thomson, Rip Anderson, Susan Kelly, Judy Vredenburg, Lawrence Barela, Rosemary Glenn, Anita Miller

Board Members Absent: None

PIC Members Present: Dan McGregor, Steve Glass, Mary Murnane, Kathy Verhage, Barbara Gastian, Mary Lou Leonard

Guests: John s. Pike (KAFB), Penny Huston (KAFB), Mark Holmes (KAFB), Shanon Minchak (CH2MHILL), Ralph Ford-Schmid (NMED), William P. Monts (NMED), James Bearzi (NMED), Patricia Dominguez (Sen. Bingaman's Office), Tom Skibitski (NMED), Jerry Lovato (AMAFCA)

- 1) Meeting called to order at 8:39 a.m.
- 2) A quorum of Board members was present.
- 3) Introductions were made by attendees.
- 4) Item I: Rosemary asked about 2 items that were not listed on the agenda – public outreach and the annual report. Mike stated that item 4 on the agenda would cover that topic.
- 5) Bruce moved to approve the agenda, Judy seconded. Meeting agenda was approved by the Board.
- 6) Item II: Bruce called for approval of minutes for the March meeting. Amendments were then provided for minutes from the meeting in March by Rosemary and Lawrence. Changes were noted and the March meeting minutes were approved as amended by the Board.
- 7) Item III: Mike introduced James Bearzi from NMED – Hazardous Waste Bureau for a presentation of updates on the Kirtland Fuel Spill.
- 8) Mr. Bearzi provided handouts on the powerpoint presentation of Kirtland Bulk Fuel Spill. He introduced other representatives from Kirtland that were present. The presentation provided a review of what has been done at the site and a preview of what is anticipated in the future. Mr. Bearzi pointed out that the location of piping below ground made it difficult to detect leaks and that extensive investigation in the potential source areas had

not been conducted. He noted two Solid Waste Management Units (SWMUs) that were referenced in the report; ST-106 and ST-111. He also stated that the assumption of fuel being confined in the vadose zone had been debunked. Two types of plumes are being investigated, the LNAPL plume and the dissolved phase plume. Contamination is estimated to extend to depths of 450 feet or greater. Investigation of the depth of migration has not been extensive and the installation of monitoring wells for these depths is more complicated. Records only provide information for the past 10 years, records were not regularly kept prior to that time, but it is assumed that the leaks were present for a long period of time due to the long period of time it takes for the contaminants to penetrate to lower depths.

The LNAPL plume may extend approximately 0.5 miles to depths of around 500 feet, and the dissolved phase plume extends at least 0.9 miles, based on EDB. Lawrence asked about the composition of the fuel, and Bruce noted that it was an important detail because AVGAS had not been stored in the tanks for decades.

Mr. Bearzi noted that the potential for impacts on drinking water calls for aggressive and urgent action and the actions that have been taken aren't urgent enough. The problem has been known for 10 years and the LNAPL plume has been investigated for the past 3 years.

Anita stated that a citizen's action group had stated concern on the Kirtland issue. Barbara Gastian noted that the issue pursued by the citizen's action group had been in relation to a mixed waste landfill and not in relation to the Kirtland plume. Mr. Bearzi stated that he had discussed the issue with Sue Dayton and Dave McCoy and agreed that more urgent action was needed. He stated that participation of citizen's groups and others would be crucial in getting the issues resolved.

Mr. Bearzi continued, noting that the EDB of the LNAPL plume at 50 ppt. Rip asked how far the plume was from City wells. Mr. Bearzi noted that the requested information would be presented on an upcoming slide. He also noted that the wells were ABCWUA wells and not City wells, for reference. Mr. Bearzi stated that determination of the down gradient extent required the installation of more wells; that more characterization was needed in the LNAPL and dissolved phase plumes to determine concentrations and gradients to define the area that needs to be cleaned up. He noted that there is a strong northward gradient. He pointed out wells located closest to the plume as shown on the slide; 3 owned by Kirtland – SE most well, SW well, and the closest NE well, the closest SW well is owned by the VA, and the others are owned by ABCWUA.

Mr. Bearzi stated that current sampling and characterization efforts are not adequate to design an effective remediation plan. The route of contaminant infiltration is not defined, which is a crucial factor. The amount of fuel released is also unknown. Determination of the mass and area of concentration will help with remediation; the vertical extent of the dissolved phase is also unknown. He also noted that the rate of migration is poorly defined. They have no clear understanding of the water table and how the aquifer behaves under normal conditions and during pumping events.

Lawrence noted that the information shows the migration as not moving. Mr. Bearzi clarified that the movement was poorly defined, and that the plume may be static is just one hypothesis; current efforts are inadequate to make any determination.

Mr. Bearzi noted that Kirtland has a Hazardous Waste Treatment Permit that is required to include corrective action. They have been working with the Groundwater Bureau, who is not satisfied with the current actions. Since the Federal Government is sovereign it

does not allow the state to file a suit against them under the Groundwater Quality Act, however the Federal government has waived immunity from suit under the Hazardous Waste Act, under RCRA. The current course of action is to investigate the issues, draft a report of the findings, provide the report for public comment and then implement the new plan. Implementation of the plan will occur in about 1 year, aside from any funding issues Kirtland may need to resolve. A tentative plan for monitoring wells has been submitted to Kirtland, pending investigation of feasibility and adjustments to meet the criteria.

Lawrence asked about data on the health effects of the contaminants due to consumption. Mr. Bearzi noted that effects are based on toxicological analysis, which shows an increased risk of cancer due to consumption of stated levels over a lifetime. Available technology also affects what levels can be detected. Monitoring will require more expense by the water utility for testing. Barbara noted that contamination of the aquifer could also result in the WUA losing the aquifer.

Rip asked if there was any understanding with the City to not use wells that are contributing to the migration of the plume toward them. Mr. Bearzi noted that it is unknown how the wells respond. There may be some potential in creating some type of reverse gradient; it is an important consideration.

Anita noted that the issues at Kirtland could result in the biggest lawsuit ever and that it is important for remediation to get underway.

Susan asked for Barbara to discuss ABCWUA activities. Barbara stated that ABCWUA has monthly records for all of their wells and there has been some reduction of pumping due to the San Juan Chama. She noted that wells in this area are critical to the water supply and provide water for areas of the City that extend over to the southwest mesa. Rip noted that even if the wells were turned off, the movement of water in the aquifer would continue due to the draw down impact on the aquifer. Barbara stated that USGS has been monitoring drawdown impacts on the wells for many years.

Lawrence asked if the Board could be doing anything to assist with the efforts. Barbara stated that ABCWUA has been working with Kirtland over the past two years on monitoring. Monthly reports have not shown the presence of contaminants.

Mr. Bearzi stated that there will be a meeting on April 23rd at Caesar Chavez to present their report. They are also planning a meeting in May in coordination with Rep. Heinrich's office, pending determination of a suitable date and time. Bruce noted that the level of detail in the information being presented was amazing. Mr. Bearzi stated that the Hazardous Waste Bureau has a lot of experience in dealing with this type of issue and has presented a plan based on their current findings aside from any unexpected results. He noted that they try to get past the noise and cited the example of efforts with LANL in which they held a number of listening sessions with the less vocal groups. They will be pursuing coordinated efforts with NMED and Kirtland.

- 9) Later in the meeting, Rip asked if the City would be reviewing the calculations on the plume to determine how fast it might be moving. Barbara noted that the status is currently unknown. She stated that the Environment Department calculation is the best available at this time. Mary supported the comment.
- 10) Item IV: Mike stated the need to determine how to coordinate with staff regarding the development of a timeline for the Surface Water Protection Plan. Mary noted that there were two spreadsheets that had been previously developed detailing major ongoing

projects and pending projects to be completed that showed which ones had been completed. Mike asked if the PIC could meet before the next Board meeting. Mary stated that the PIC could meet to discuss recommendations on SWPP policies to present to the Board before the next meeting. Barbara added that PIC members could discuss a time to meet after the end of today's meeting. She suggested meeting at the water treatment plant for the upcoming PIC and WQPAB meetings.

- 11) Barbara noted the need to update the inventory of ongoing projects. Susan requested an electronic copy be provided to members prior to the meeting at which they would be discussed. Mary stated that an electronic copy could be provided prior to the meeting. It was noted that compilation of surface water and groundwater issues had not yet been reviewed. Mary agreed that inclusion of new issues and updates for issues, such as Kirtland and public information. Anita added a need for clarification on arsenic treatment. Mary noted that there were a lot of updates to discuss.
- 12) Item V: Mike introduced Ralph Ford-Schmid to present information regarding the NMED DOE PCB Study. Lawrence stated that since he was a DOE employee he would only be participating as an observer. Mr. Ford-Schmid noted that he was with NMED and the study was oversight of DOE by NMED.
- 13) The study was an analysis of whether there are any contaminants from LANL in ABCWUA surface water resources. A handout was provided for the presentation. Initial investigations included a new site in Albuquerque, however signals from the original location were dampened by the presence of a dam upstream from the site. The site was then moved upstream to a site located in the Rio Grande State Park, near the boundary of the pueblo. Results from monitoring at the site found levels that correlated to background levels and did not show elevated levels of contaminants found at LANL. Results of sampling showed levels that were 30 times lower than the NMED proposed standard for municipal water supplies. The study sampled for concentrations in water and concentrations in sediment. LANL developed a background concentration level of 0.02 picocuries/gram. Sediment samples were compared with sediment from reservoirs and showed a close match of 80% fine grain particles with the high point of concentration at 0.023 picocuries/gram. There were also elevated gross alpha levels in background samples. PCBs were all below the WQ standards upstream. Levels of concentration in past samples were not distinguishable from background levels. There were difficulties in collecting samples during release events from LANL. The most recent sampling event was able to capture samples during a discharge from LANL, however results have not been received from the lab as yet.

To capture discharge waters, samplers were set on a 21 minute delay for the sampling event on 7/21/2009 of flow in the North Diversion Channel. Concentrations of PCBs exceeded the WQ standard and the concentration of cadmium was just above the WQ standard, but not significantly. PCB concentrations on the graph showed levels at 600 times the criteria. Barbara noted that the criterion levels shown are for raw water, and meets finished water standards. Finished water concentrations are set at 0.5, the highest reading in the samples was 0.389. Mr. Ford-Schmid noted that NMED used the surface water standard due to the fish consumption advisory requirements.

PCBs were categorized by groupings of 209 congeners based on chlorine groups to assist in tracking the source. Samples in 2002 and 2003 measured concentrations in samples from 2 upstream sites and downstream from Albuquerque and Angostura. Samples from the upstream sites showed lower concentrations than those downstream. Sampling of fish tissues prompted the issuance of a fish advisory for catfish and white bass based on the content of PCBs. Sampling for PCBs also included the use of two

layers of a semi permeable membrane with fish fat placed in between. Levels were elevated in samples taken below Cochiti, suggesting a source of PCBs between Cochiti and Albuquerque. Levels measured 189 ppb.

Susan asked about the sample size for collecting the fish tissue samples. Mr. Ford-Schmid stated that composite samples were taken from 4-5 different fish, 6 fish, 7 fish, and in one sample 1 large fish; generally composites contained tissue from 4-6 fish. Samples showed a similar pattern of concentrations. It has not been determined whether the source may be from water flowing into the North Channel or as a result of high flows stirring up sediment containing contaminants. PCBs may also be contributed from areas such as Bernalillo or other municipalities upstream of Albuquerque. Additional sampling will be needed to better define the potential source of the contaminants.

Rip asked about PCB sampling in the flood channel. Mr. Ford-Schmid noted that the City, USGS, and AMAFCA sample for contaminants, however the methods they use are not as sensitive as the ones utilized in the sampling by NMED for this study. Methodology used by NMED has a detection limit in the parts per quadrillion range. EPA has not yet approved this methodology as a 40CFR method as yet. Current EPA methods are unable to detect lower concentration levels. Contaminants from LANL are not distinguishable in samples from the Albuquerque sites. Sampling closer to the Los Alamos facility may be needed. Mike agreed that more work was needed.

Mr. Ford-Schmid stated that they have met with the responsible parties and submitted a draft plan to assess ruling out the DOE facility. Recommendations were made for a blend of sediment and water sampling to focus efforts or rule out potential sources. Evaluation of sample contaminants showed the presence of Acrochlor 1260, which is typically found in transformers and transmission equipment.

Bruce noted that the challenges of sampling and analyzing data is as much an art as it is a science. It was noted that only a few labs are capable of detecting the lower limits in samples. Mr. Ford-Schmid listed Axis Labs, ALS, ALTA, and Columbia that were able to analyze samples for lower limits. He stated that there were 6-8 labs capable of running this type of analysis. The lab they are working with is coordinating with EPA to develop the methodology. Each sample is anticipated to cost \$1150 to analyze. But, the information is precise and allows them to look at patterns and pinpoint potential sources.

- 14) Mr. Ford-Schmid continued, stating that PCBs degrade over time and breakdown into other chlorine elements which can become more toxic. Congeners such as 1242 are found in compounds commonly used in transformers, gas, transmission fluid, and adhesives; 1221 is found in compounds used in capacitors; PCB3 was detected in runoff from a burned area of the Bosque, and believed to come from capacitors that were burned in the area and flushed out in runoff from the area.

Bruce asked if there was any contemplation of regulatory action being taken. Mr. Ford-Schmid stated that they were not a regulatory entity, and they only oversee activities. The Surface Water Bureau would be the regulatory agency to take an action, but they would need to define who to take an action against. Regulation would be related to permitting for surface water. Kathy Verhage added that they currently have a permit and studies are already budgeted in coordination with AMAFCA to study work with USGS and may include additional sampling or include other areas.

Mr. Ford-Schmid stated that the draft report will be released in about a week after they have incorporated comments. Notification will be provided in a press release for public comment, but it is not available to the public as yet.

Jerry Lovato asked to review the slides depicting the two fingerprints of the PCB congeners. He stated that the molecular changes in the congeners could account for the congeners shown from downstream samples; that they could be looking at older congeners from the same source. Mr. Ford-Schmid stated that there was no evidence of the heavier congeners in samples downstream. It was suggested they continue the discussion after the meeting due to time constraints.

15) Mike suggested a review of the Public Outreach efforts and a presentation of the Storm Water team by Steven Glass at the next meeting.

16) Mike called for adjournment. The meeting was adjourned at 10:45am.